Michael A R Biggs "On Method: the problem of objectivity" in: Durling, D. and K. Friedman (eds.) *Doctoral Education in Design: foundations for the future,* 209-214. Stoke-on-Trent, UK: Staffordshire University Press, 2000. ISBN 1-897898-64-9
Online version. Original pagination in square brackets

On Method: the problem of objectivity
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Abstract

In this paper I shall criticise the notion of objectivity in design research methodology. I shall argue that the requirement for such objectivity is either implicit in the phrasing of research degree regulations, or is widely assumed in their interpretation. The philosophical error is the assumption that objectivity is either methodologically possible or desirable.

I raise four temptations for the research student: the apparent benefits of the scientific method, objectivity and knowledge, objectivity in aesthetics, and objectivity in PhD examination. In each case I raise objections that question whether objectivity has really been achieved, and whether the method can be applied in design research. I conclude that the appropriateness of any method is demonstrated by the validity of the outcomes it produces as judged in context by subject peers, and not by tests based on false or unachievable notions of objectivity or universality.

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On Method: the problem of objectivity

The argument of this paper is that there are several temptations for students, and for some supervisors, to adopt inappropriate research methods because they appear to offer objectivity. I shall suggest four such temptations and raise objections to each. I shall then offer a counter argument that abandons the quest for objectivity on the basis that it is neither possible nor desirable.

The first temptation is that students who have been educated in design have a naïve view of what science students do when undertaking a research degree. This problem has at its base the fact that most students have arrived in an arts discipline precisely because they have rejected a science one, or been rejected by its teachers, and that the education system therefore separates students at an early stage and preserves their ignorance of what lies on the other side of the fence. If you seek institutionalised evidence for this great divide you have only to enter the British Library and ascend the main stairs to find, at the top you must turn one way for the sciences and the other for the arts.

We are often told that research in the arts is a relatively new activity, especially that which leads to a research degree. So what view of research methods filters through the internal windows of the British Library from the more established realms of science? It is "the scientific method." This method has resulted in unequivocal advances in medicine, technology, etc. and seems to have increased our knowledge of the external world. In particular it offers us a method of quantification and thereby "control of Nature." So there is a temptation for the naïve arts student that science offers demonstrable benefits from a unified method that is applicable across many disciplines. I propose that under pressure from supervisors and others to be explicit about methodology from the outset, the scientific method is unduly tempting. But we have already noted one benefit of this method that would seem difficult for the arts student to take advantage of, and that is the quantification and control of Nature. As a result we see some arts students diverted into making studies of materials or applications using new technology, and other pseudo-scientific arts research.

The second temptation arises from the research degree regulations themselves. Most in the UK have their roots in the superseded CNAA regulations and their stipulation that the research makes "an original contribution to knowledge." The idea that an artefact, etc. can be a contribution to knowledge is not a phrase that comes "trippingly on the tongue" to most of us. It is a contribution to the materiality of the world, to experience, to culture, to interpretation; but to knowledge? Thus the student, and sometimes their supervisors, reach for their philosophy books in the search for a definition of knowledge. The theory of knowledge (epistemology) takes as its starting point the tacit definition that knowledge is in some way

related to truth and certainty. Thus knowledge is assumed to be independent of the researcher and objective.
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So readers of, for example, John Hospers's excellent "Introduction to Philosophy," will find references to Descartes, Ayer, etc. all of whom advocate methods leading to objective knowledge. When we ask, "what kind of knowledge do we get by this procedure?," we find that knowledge may consist of, for example: certainty of first-person experience but doubt about others [Descartes], doubt about the self [Berkeley], certainty that reality lies beyond human experience [Kant], that there is nothing more real than that which is here and now [Heidegger], and the cautiously expressed view of common-sense which most of us hold as a fact; that the Earth has been here for longer than I have [Moore]. I propose that if students discover that applying epistemic methods uncovers no more useful facts than these, then they may well think that this knowledge is a disappointment.

The third temptation is Kantian aesthetics. Taking our motivation as being a quest for a method that will generate knowledge, but knowledge that is more applicable to design research than that produced by the scientific method or by metaphysical epistemology, I propose that Kant's works might seem an attractive place to visit. Not that Kant is known as an attractive read in the conventional sense, but to our aspiring researcher here is someone who understands method and has attempted to apply a rigorous process to the problems of aesthetics and come up with some specific things to say about aesthetic knowledge. In particular, one of his main findings is that objective aesthetic judgement, the "judgement of taste," is possible and therefore The Critique of Judgement is presumably compulsory reading for research students, [but unfortunately compulsory for their supervisors too].

A lightening survey of Kant's quest to account for the possibility of aesthetic objectivism might proceed thus: an aesthetic response is our first-hand, direct, felt response to a particular object. We cannot summarise what makes for an aesthetic response in terms of general rules, and so it is not to these general rules that we react. However, this causes a problem because we do not all react uniformly to particular objects whereas there is at least a possibility that we might react uniformly to general rules. If aesthetic value were an inherent property of objects one would expect considerable uniformity of reaction. We don't so it isn't. Thus Kant seeks to account for "correct" aesthetic judgement by achieving a uniform intellectual vantage-point that we can each achieve by virtue of our mental construction as human beings. This vantage-point is called "disinterestedness" and consists in freedom from desire, practical concern and conceptual understanding. Aesthetic judgement consists of both an experiential and a reflective component. The resulting "pure judgement of taste" would be uniform if individuals were to achieve the appropriate contemplative conditions.

I have now advanced three temptations that I believe lie before the aspiring design researcher as false models of how to progress valid research.
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But these temptations are not just placed before the unwary student, but are institutionalised in the process of studying for, and awarding, a research degree. This brings me to my fourth temptation which is a temptation for the supervisor. It is driven by the uncomfortable knowledge that at the end of three to six years of research endeavour by the student, the results will be examined by total strangers on whose say-so it will stand or fall. Thus, anticipating the demands of the examiners becomes a key role for the supervisor. What will the examiners be looking for?

The experienced academic knows that assessments should be valid and reliable. Thus the criteria must have some sort of objectivity about them and be independent of the personal preferences of the examiners. The pressure of the examination process therefore reinforces the anxiety of both the student and the supervisor that the research methods themselves must demonstrate objectivity because the outcomes will be assessed by a process that demands objectivity.

I have now proposed four separate ways in which the design researcher might be tempted and I have suggested that the temptations are illusory. I shall now proceed to offer some objections.

First, the apparent benefits of the scientific method. What is the view of the scientific method from the discipline-specific location of design? The "control of Nature" is not very attractive. We seek the control of materials, but the artefacts themselves function in a cultural and aesthetic context. The contribution that a design artefact makes to knowledge requires the control of reception aesthetics, not of the control of Nature.

Because a correspondence is assumed between the scientific model or theory and the external world that it seeks to represent, control within the model may be replicated by control of the external world. According to Kuhn (1970), in scientific revolutions, we see changes in the dominant paradigm or model, and such changes enable new representations of Nature which thereby permit better control of it. But the representational relationship in design is more complex. Although, for example, design semantics is informed by the psychology of perception, it is also engaged in the social and cultural nexus. It is therefore revised as often by changes in society as by changes in cognitive models. According to Berger (1972), in aesthetic revolutions we are given new "ways of seeing" that do not render the old ways obsolete. In particular, the new way repositions the viewer in relation to the artefact. Nothing in the perceptual model has changed, the visible appearance remains the same. However, the interpretation: what it means, has changed. The unavoidable fact that the viewer is situated in a cultural relationship with the artefact need not be a disadvantage. It is only a disadvantage if that situatedness goes unrecognised. This is the contribution of Irigaray, Derrida, and others.

Second, the objectivity of knowledge. Our guide will be Popper but our starting point will be Bacon. It was he who suggested that by following a
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certain procedure of experimentation and judicious description, the laws of Nature might be identified. However, his inductive method was criticised by Hume on the basis that no quantity of observations is sufficient to establish the necessary or causal relationship between events and the laws of Nature of which they are supposed to be symptoms. Our habit of connecting one event with another is more expressive of a law of psychology than a law of Nature. Unfortunately it is exactly this habit which underpins the whole scientific method, and even Bertrand Russell admitted it could not be substantiated as a valid inference (Russell 1961: 647).

So does this criticism mean that the scientific method does not generate objective knowledge? Well, only in part. We need to change our concept of "objective" to "provisional." Popper's revision is to say that the scientific method is verifiable. The more resistant a result is to systematic attempts to falsify it, the more valid it becomes as an inductive conclusion. Thus scientists do not have at their disposal the kind of wonder-method that designers suppose. The scientific method produces provisional conclusions that are as strong as the strength required to falsify them. There is an objectivity to Popper's method: in that it is universally applicable, but the results are just conditional. Thus Popper says both "statements of experimental results are always interpretations of the facts observed; that they are interpretations in the light of theories" (Popper 1972a: 107) and "the belief that we can start with pure observations alone, without anything in the nature of a theory, is absurd" (Popper 1972b: 46).

Third, Kantian aesthetics. The freedom from desire, practical concern and conceptual understanding bring with them three disadvantages. To free oneself from desire, practical concern and conceptual understanding presupposes these conditions as constraints on aesthetic judgement. Take, for example, "desire" in the sense of "an imagined representation that tends towards its satisfaction" (Kant 1980: 178). Would we today want to say desire is part of, but a hindrance to aesthetic judgement? Our current use of the term in commodification still has [supposed] satisfaction at its core, but the extent to which we commodify aesthetic judgement is the extent to which we attach it to something material and capable of manipulation rather than preserving it in the realm of aesthetics. So while it might be "part of...," the notion that it is a "hindrance to..." is the point at which we part company with Kant. Similarly "practical concern," being the extent to which an object is complete without needing a purpose or application (Kant 1980: 236) is not, I suggest, compatible with contemporary aesthetic judgement because we do not exclude the objects of design, etc. from consideration. Finally, freedom from "conceptual understanding," to the extent that it emphasises imagination as a counterpart to cognition (Kant 1980: 190), is incompatible with notions such as design semantics.

Fourth, the objectivity of assessment. The examiners are subject peers, who
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are required to apply the university's regulations to the assessment of a PhD. The research must provide an "original contribution to knowledge." Therefore the examiners cannot be expert in exactly this part of the field since it is the researcher's contribution: the researcher is the expert about that. But it should also "place the research in a critical and cultural context." Thus "2+2=4" as a final thesis submitted for PhD, although high in accuracy, would fail this criterion. All that the examiners can do is to assess the methods by which the contribution was identified and manifested, and base their judgement on subject-specific precedents from the same cultural context as that inhabited by the researcher. Both the examiners and the researcher share a common culture and will speak its language at the examination. Any evaluation of methods will itself be undertaken in a critical and cultural context.

The common theme to all the temptations has been the claim of objectivity. I argue that objectivity is either inappropriate, e.g. temptations one and three, or unachievable, e.g. temptations two and four. But then, what help can we offer the aspirant design researcher when asked by a supervisor "what is your method?" This paper does not answer the question, but shows some common places where it is fruitless to search. The appropriateness of any method is shown by its use within the field of study, or its transferability to it. The method must withstand the critical scrutiny of the examiners for its appropriateness, i.e. the production of valid outcomes. However, the method does not have to withstand a test of objectivity or universality. The method must simply be defendable for the researcher's task and its appropriateness must be made explicit by a critical analysis and evaluation of its application in the researcher's PhD thesis.

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